



ATI's Model Q40CT toroidal conductivity system is designed for on-line monitoring of chemically aggressive process solutions. This blind, analog version is ideally suited for applications where reliable instrumentation is critical and economy of installation is essential.

Toroidal sensors are available in polypropylene, Kynar, and PEEK to ensure sensor wetted materials are chemically resistant to process chemicals. Sensor material is also non-conductive, thereby isolating the sensor from electrical noise and ground loops that can influence the integrity of the

measurement.

Sensors can be submersion-mounted for easy installation in open tanks or pipe-mounted in the optional 2" tee fitting, which is keyed to the sensor for proper alignment. Tee fitting material is either polypropylene or 316 stainless steel.

The Q40CT toroidal conductivity system is easy to operate, requires minimal maintenance and is economical to own, yet provides reliable measurement of your chemical process.

System Features

Loop-powered Version: Transmitter is powered by 16-35 VDC via a twisted-pair, which also carries analog output signal.

Selectable Measuring Range: User selects system measuring range to improve resolution of output signal. Measuring range options are minimum 0-1000 microSiemens to a maximum of 0-1,000,000 microSiemens.

Easy Calibration: Easily accessible controls for adjusting system offset and span.

Automatic Temperature Calibration : Temperature response curve is user adjustable to improve measurement accuracy.

NEMA 4X Enclosure: Polycarbonate enclosure is weather-proof and corrosion resistant to protect electronics from environmental influence.

Multiple Monitoring Configurations: Universal mounting bracket allows for wall, pipe, DIN rail, handrail, and panel mounting options.



Model Q40CT
Toroidal Conductivity Monitor

Model Q40CT Toroidal Conductivity System Specifications

Electronic Monitor

Measuring Range:	0-1000 microSiemens, minimum; 0-1,000,000 microSiemens, maximum
Sensitivity:	≥0.1% of selected range or 10 microSiemens
Repeatability:	≥0.2% of selected range
Non-linearity:	≥0.5% of selected range
Zero Drift:	< 1% span per month, noncumulative
Operating Conditions:	-20-60°C., 0-95% R.H. non-condensing
Temperature Drift:	0.08% of range/°C, span or zero
Stability:	0.2% of range per 24 hours, non-cumulative
Power:	16-35 VDC (Loop-powered Unit)
Insertion Loss:	16 VDC
Enclosure:	NEMA 4X (IP-66) Polycarbonate, Wall, Panel, or Pipe Mount (steel hardware), weather- proof and corrosion resistant,
HWD:	4.4" (112 mm) x 4.4" x 3.5" (89 mm)
Weight:	1 lbs. (0.45 Kg.)
Conduit Openings:	Three PG-9 openings, cord grips included
Temperature Input:	PT1000 RTD with automatic compensation, adjustable from 0.0 to 4.0%/°C

Sensor

Sensor:	Toroidal electrode
Wetted Materials	Polypropylene, Kynar, or PEEK
Sensor Cable:	20 feet (6.1 m) standard, maxi- mum length 200 feet (61.0 m)
Response Time:	2 seconds to 90% of full scale
Temperature Limits:	0-105°C
Pressure Limits:	150 psig
Process Connection:	3/4" MNPT rear thread, optional 2" keyed tee fitting
Temperature Element:	PT1000 RTD
Minimum Conductivity:	500 microSiemens

Ordering Information: Model Q40CT-A-B Blind Toroidal

Suffix A - Sensor Type	Options:
1 - Polypropylene with 20' cable	63-0083 2" Tee Fitting, Polypropylene
2 - Kynar with 20' cable	63-0084 2" Tee Fitting, 316SS
3 - PEEK with 20' cable	07-0100 NEMA 4X Junction Box
Suffix B - Tags	31-0057 5 conductor sensor interconnect cable (max. 100 ft.)
1 - None	09-0048 Calibration Solution - 1,500 microSiemens, 500 mL
2 - Stainless Steel (Tag text required)	09-0049 Calibration Solution - 8,974 microSiemens, 500 mL
	09-0050 Calibration Solution - 80,000 microSiemens, 500 mL



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